



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/520,317

07/15/2005

Paul Marriott

1-26501

2512

4859 7590 04/30/2007  
MACMILLAN SOBANSKI & TODD, LLC  
ONE MARITIME PLAZA FIFTH FLOOR  
720 WATER STREET  
TOLEDO, OH 43604-1619

EXAMINER

MCNALLY, KERRI L

ART UNIT

PAPER NUMBER

2609

MAIL DATE

DELIVERY MODE

04/30/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

### Application No.

10/520,317

### Applicant(s)

MARRIOTT, PAUL

### Examiner

Kerri McNally

### Art Unit

2609

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3-9 and 16-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-9, 16-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 20070410
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Examiner's Note*

The specification contains the following language: "In the present specification "comprises" means "includes or consists of" and "comprising" means "including or consisting of". Examiner understands that "includes or consists of" and "including or consisting of" could be either open ended or close ended and therefore, examiner takes it to be open ended.

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 7, 8, and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent No. 7,109,853 (Mattson et al.).

Considering claim 1, Mattson discloses a system for detecting and releasing a person locked in the trunk of a vehicle that utilizes a sensor for detecting carbon dioxide (intrusion detector for a vehicle comprising a carbon dioxide detector) (see Title and Abstract). Mattson also discloses that a microprocessor compares the level of carbon

Art Unit: 2609

dioxide detected in the trunk to a baseline level of carbon dioxide that was measured the last time the trunk was opened (carbon dioxide detector responsive to the presence of carbon dioxide in a compartment of the vehicle). The system is configured to be wired to existing systems of the vehicle through a serial data interface (detector being attachable to the vehicle) (see Fig. 1, item 16). If excessive carbon dioxide is detected, the microprocessor provides an alarm (intrusion detector is operable to generate an alarm if the concentration of carbon dioxide in the compartment exceeds a selected level) (Column 1, lines 48-56).

Considering claim 7, Mattson discloses that visible, audio, and radio alarms are generated in response to the detection of a person in the trunk (alarm includes an audible alarm) (see Abstract).

Considering claim 8, Mattson discloses that a carbon dioxide detector may be replaced or augmented by infrared and electrostatic capacitive sensors (intrusion detector further including an auxiliary detector responsive to the presence of a person to the compartment) (Column 5, lines 44-46).

Considering claim 19, Mattson discloses a system for detecting and releasing a person locked in the trunk of a vehicle (vehicle having a compartment) that utilizes a sensor for detecting carbon dioxide (intrusion detector including a carbon dioxide detector) (see Title and Abstract). Mattson discloses that the system is configured to be wired to

Art Unit: 2609

existing systems of the vehicle through a serial data interface (detector attached to said vehicle) (see Fig. 1, item 16). Mattson also discloses that a microprocessor compares the level of carbon dioxide detected in the trunk to a baseline level of carbon dioxide that was measured the last time the trunk was opened. If excessive carbon dioxide is detected, the microprocessor provides an alarm (carbon dioxide detector responsive to a predetermined concentration of carbon dioxide in said compartment for generating an alarm) (Column 1, lines 48-56).

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 3, 4, 20, 21, 22, 23, 24, 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 4,718,268 (Reid et al.) in view of US Patent No. 7,109,853 (Mattson et al.).

Considering claim 3, Reid discloses that the apparatus for detecting a contraband substance in freight cargo containers is attachable to the outside of the cargo container (intrusion detector for a vehicle, the detector being attachable to the vehicle) (intrusion detector is adapted to be mounted on the exterior of the vehicle) (see Fig. 7). Reid also discloses a passageway where air is passed from the compartment to the sensor system (wherein a duct is provided whereby air from the compartment may be passed to the detector) (see Fig. 7). Reid does not expressly disclose:

- Said detector being a carbon dioxide detector responsive to the presence of carbon dioxide in a compartment of the vehicle
- Intrusion detector is operable to generate an alarm if the concentration of carbon dioxide in the compartment exceeds a selected level

Mattson discloses a system for detecting and releasing a person locked in the trunk of a vehicle that utilizes a sensor for detecting carbon dioxide (said detector being a carbon dioxide detector responsive to the presence of carbon dioxide in a compartment of the vehicle) (see Title and Abstract). Mattson also discloses that visible, audio, and radio alarms are generated in response to the detection of a person in the trunk (Intrusion detector is operable to generate an alarm if the concentration of carbon dioxide in the compartment exceeds a selected level) (see Abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine a carbon dioxide detector with the system of Reid to detect for any animals or humans that may be trapped in the container. Furthermore, it would have been obvious to one of ordinary

Art Unit: 2609

skill in the art at the time the invention was made to combine an alarm with the detector to notify someone when the level of carbon dioxide inside the compartment exceeded normal levels.

Considering claim 4, Mattson discloses the system of claim 1 and Reid and Mattson disclose the system of claim 3 as discussed above. Reid also discloses that a fan is utilized to draw air from a sampling line into an inlet of a collector (see Fig. 9 and Column 6, lines 7-10). Reid does not expressly disclose:

- Said detector being a carbon dioxide detector

Mattson discloses a system for detecting and releasing a person locked in the trunk of a vehicle that utilizes a sensor for detecting carbon dioxide (said detector being a carbon dioxide detector) (see Title and Abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine a carbon dioxide detector with the system of Reid to detect for any animals or humans that may be trapped in the container.

Considering claim 20, Mattson disclosed the system of claim 19 as discussed above. Reid discloses a method and apparatus for detecting a contraband substance in freight cargo containers, such as trailers pulled by truck tractors (vehicle comprises a trailer for a tractor-trailer combination) (Abstract and Column 3, lines 5-6). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a

Art Unit: 2609

carbon dioxide detector system in the trailer of a truck to detect any unwanted animals or humans that may be trapped inside.

Considering claim 21, Mattson discloses the system of claim 19 as discussed above.

Reid also discloses that the apparatus for detecting a contraband substance in freight cargo containers is attached to the outside of the cargo container (intrusion detector is mounted on an exterior of said vehicle) (see Fig. 7). Reid also discloses a passageway where air is passed from the compartment to the sensor system (wherein a duct is provided whereby air from the compartment may be passed to the detector) (see Fig.

7). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a carbon dioxide detector in the air duct system of Reid to detect any unwanted animals or humans that may be trapped inside.

Considering claim 22, Reid and Mattson disclose the system of claim 21 as discussed above. Reid also discloses that a fan is utilized to draw air from a sampling line into an inlet of a collector to be tested (intrusion detector further includes a fan mounted to cause a flow of air from said compartment through said carbon dioxide detector) (see Fig. 9 and Column 6, lines 7-10). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a carbon dioxide detector in the air duct and fan system of Reid to detect any unwanted animals or humans that may be trapped inside.



Art Unit: 2609

Considering claim 23, Reid and Mattson disclose the system of claim 21 as discussed above. Reid does not expressly disclose that the selected level of carbon dioxide is at least 2000 ppm. However, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations *Ex parte Masham* 2 USPQ2d 1647 1987).

Considering claim 24, Reid and Mattson disclose the system of claim 22 as discussed above. Reid does not expressly disclose that the selected level of carbon dioxide is at least 2500 ppm. However, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations *Ex parte Masham* 2 USPQ2d 1647 1987).

Considering claim 25, Reid and Mattson disclose the system of claim 22 as discussed above. Reid does not expressly disclose that the selected level of carbon dioxide is at least 3500 ppm. However, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations *Ex parte Masham* 2 USPQ2d 1647 1987).

Art Unit: 2609

Reid and Mattson are analogous art because they are from the same field of endeavor of detectors for closed systems.

4. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 7,109,853 (Mattson et al.) in view of US Patent No. 5,515,285 (Garrett, Sr. et al.).

Considering claim 5, Mattson disclosed the system of claim 1 as discussed above.

Mattson does not expressly disclose:

- An intrusion detector that includes a battery which is connectable to be charged from a power supply of the vehicle

Garrett, Sr. discloses a system for monitoring vehicles that includes intrusion detector means (intrusion detector) (Column 3, lines 33-36). The intrusion detector is generally powered by the 12 V battery bus of the vehicle, but also has as separate storage battery that may be charged by the vehicle charging system (includes a battery which is connectable to be charged from a power supply of the vehicle) (Column 6, lines 52-64). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the carbon dioxide sensing system with a battery chargeable by the vehicle so the detector can continuously detect the contents of the container even when the vehicle is not in operation.

Art Unit: 2609

Mattson, and Garrett, Sr. are analogous art because they are from the same field of endeavor of sensor systems.

5. Claims 6, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 7,109,853 (Mattson et al.).

Considering claim 6, Mattson discloses the system of claim 1 as discussed above. Mattson does not expressly disclose that the selected level of carbon dioxide is at least 2000 ppm. However, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations *Ex parte Masham* 2 USPQ2d 1647 1987).

Considering claim 17, Mattson discloses the systems of claims 1 and 6 as discussed above. Mattson does not expressly disclose that the selected level of carbon dioxide is at least 2500 ppm. However, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations *Ex parte Masham* 2 USPQ2d 1647 1987).

Considering claim 18, Mattson discloses the systems of claims 1 and 6 as discussed above. Mattson does not expressly disclose that the selected level of carbon dioxide is

Art Unit: 2609

at least 3500 ppm. However, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations *Ex parte Masham* 2 USPQ2d 1647 1987).

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 7,109,853 (Mattson et al.) in view of US Patent No. 6,480,103 (McCarthy et al.).

Considering claim 9, Mattson discloses the system of claims 1 and 8 as discussed above. Mattson does not expressly disclose:

- Auxiliary detector comprises a PIR detector

McCarthy discloses a compartment sensing system that utilizes one or more secondary sensors that are coupled to the primary sensor, including one or more PIR sensors (auxiliary detector comprises a PIR detector) (Column 3, lines 32-35 and Column 4, lines 60-61). It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a PIR sensor in addition to a carbon dioxide sensor so that movement of persons or animals could be detected if the level of carbon dioxide was not high enough to trigger the alarm on the carbon dioxide sensor.

Art Unit: 2609

Mattson and McCarthy are analogous art because they are from the same field of endeavor of sensor systems.

7. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 7,109,853 (Mattson et al.) in view of US Patent No. 6,199,904 (Dosdall).

Considering claim 16, Mattson discloses the system of claims 1 and 8 as discussed above. Mattson does not expressly disclose:

- Auxiliary detector comprises a microwave detector

Dosdall discloses an occupant detecting system for a car seat utilizing a microwave detector (Auxiliary detector comprises a microwave detector) (see Abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a microwave detector in addition to a carbon dioxide sensor so that a person or animal taking up space in the container could be detected if the level of carbon dioxide was not high enough to trigger the alarm on the carbon dioxide sensor.

Mattson and Dosdall are analogous art because they are from the same field of sensor systems.

### ***Conclusion***

Art Unit: 2609


8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent No. 6,470,278 (Strumolo et al.), US Patent No. 6,424,267 (Schell), US Patent No. 3,647,392 (McGinnis).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kerri McNally whose telephone number is 571-270-1840. The examiner can normally be reached on Monday - Friday 7:30 AM - 5:00 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chip Garber can be reached on 571-270-1202. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KLM



DENNIS-DOON CHOW  
PRIMARY EXAMINER